



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,593	12/31/2003	Joseph Patino	CE11882JEM	8591

7590 03/19/2007
Larry G. Brown
Motorola, Inc.
Law Department
8000 West Sunrise Boulevard
Fort Lauderdale, FL 33322

EXAMINER

BOATENG, ALEXIS ASIEDUA

ART UNIT	PAPER NUMBER
----------	--------------

2838

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/750,593

Applicant(s)

PATINO ET AL.

Examiner

Alexis Boateng

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-14 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-14 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 4, 6, 10 – 12 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Toya (U.S. 6,040,680).

Regarding claims 1 and 19, Toya discloses a method for charging a battery comprising the steps of:

supplying a charging current to a battery through a first charging wherein the battery includes the first charging circuit and provides power to an electronic device (figure 2 item 120; column 6 lines 1 – 8);

sensing the charging current to the battery (figure 2 item 125);

selectively signaling an electric device from the battery to indicate at least one parameter of the battery as the battery is receiving the charging current (column 6 lines 29 – 56);

in response to selectively the electronic device, disabling a second charging circuit, wherein the electronic device includes the second charging circuit and the second charging circuit is capable of directing charging current to the battery if charging current is being fed to the electronic device (figure 2 item 123; column 6 lines 1

– 8: the protection circuit cuts of the current supplied to the control circuit, item 120, which disables the circuit).

Regarding claim 2, Toya discloses wherein the charging current is from a wireless charger from the first charging circuit (figure 1 item 101).

Regarding claims 3 and 12, Toya discloses wherein the parameter is at least one of a charging state of the battery and predetermined current threshold of the charging current from the first charging circuit (column 6 lines 1 – 8 and lines 41 – 57).

Regarding claim 4, Toya discloses wherein the battery signals the electronic device over an input/output line and wherein the input/output line is a preexisting reading conductor (figure 2 item 105).

Regarding claim 10, Toya discloses a method for charging a battery, comprising the steps of:

an electronic device (figure 1 item 103);

a charger (figure 2 item 101); and

a battery (figure 2 item 111), wherein the battery supplies power to the electronic device wherein the charger supplies a charging current to a battery through a first charging circuit included in the battery (figure 2 item 120; column 6 lines 1 – 8; charging circuit is comprised within the battery pack); and wherein the battery includes a charging monitor that senses the charging current (figure 2 item 125);

selectively signaling an electric device from the battery to indicate at least one parameter of the battery as the battery is receiving the charging current (column 6 lines 29 – 56: current sensing circuit 125 indicates that the battery is receiving charge);

in response to selectively the electronic device, disabling a second charging circuit (column 6 lines 29 – 56: charging circuit 123 is stopped), wherein the second charging circuit is capable of directing charging current to the battery if charging current is being fed to the electronic device (column 6 lines 29 – 40).

Regarding claim 11, Toya discloses wherein the charger is wireless charger (figure 1 item 101; column 1 lines 1 – 17) and the charging monitor is a processor (column 7 lines 24 – 38).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-5, 13, and 14, are rejected under 35 U.S.C. 103(a) as being unpatentable over Toya (U.S. 6,040,680) in view of Watts (U.S. 2002/0175658).

Regarding claims 4, 5, 13 and 14, Toya does not disclose the invention as claimed. Watts discloses in figure 2 wherein the battery signals the electronic device over an input/output line, figure 2 items 16 and 17, and wherein the input/output line is a preexisting reading conductor, figure 2 item 15. Watts discloses wherein the preexisting reading conductor is a thermistor, figure 2 item

15. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Toya system with the Watts system so that the controller can monitor the temperature and charging operations of the system.

5. Claim 7-8, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toya (U.S. 6,040,680) in view of Sengupta (U.S. 6,320,354).

Regarding claim 7 and 16, Toya does not disclose wherein the method comprises the step of updating a charging indicator of the electronic device.

Sengupta discloses in column 5 lines 52 – 65 wherein a charge indicator is used to identify the level of charge. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Toya system with the Sengupta system so that the system shows the user when the battery needs to be charged and when charging should be stopped.

Regarding claim 8 and 17, Toya does not disclose the invention as claimed.

Sengupta discloses in column 3 line 50 – column 4 line 33 wherein controller toggles the between input/output line between a high state, a low state and a release state during the signaling step. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Toya system with the Sengupta system so that controller can be recharged.

6. Claims 9 and 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Chao (U.S. 6,057,668) in view of Sengupta (U.S. 6,320,354).

Regarding claim 9, Chao discloses supplying a charging current form a wireless charger to a battery in column 1 lines 47 – 45 and sensing a the charging current

in figure 1 item 12. Chao further discloses in figure 1 item 134 and in column 3 line 6 – 18 wherein the battery indicates to the electronic device at least one parameter of the battery as the battery is receiving the charging current. Chao discloses the invention as previously claimed, but does not disclose the remainder. Sengupta discloses in column 3 line 50 – column 4 line 33 wherein the system selectively switches between high and low states an input/output lines between an electronic device. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Chao system with the Sengupta system so that controller can be recharged.

Regarding claim 18, Chao discloses in column 1 lines 6 –10 wherein the charger is used is contact-free, but does not disclose wherein the charging monitor is a processor. Sengupta discloses in figure 5 item 507 (identified as item 506 in specification), wherein the charging monitor is a processor. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Chao system with the Sengupta system because it is more efficient to monitor the charge by using specific programs.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sengupta (U.S. 6,320,354) in view of Toya (U.S. 6,040,680).

Regarding claim 20, Sengupta discloses an electronic device comprising a processor (figure 5 item 507); an input/output line coupled to the processor (figure 4 items 414 (output line) and 416 (input line)); a charging circuit (figure 5 item 404); a charging indicator (figures 7-9); wherein the processor is

programmed to detect signals over the input/output line and in response to the detection of the signals (column 3 line 50 – column 4 line 33), and updating the charging indicator (column 5 lines 52 – 65). Sengupta discloses the invention as claimed, but does not disclose wherein a second charging circuit and the processor is further programmed to perform at least one of disabling the second charging circuit. Toya discloses in column 6 lines 1 – 8 wherein charging is ceased when it becomes too high. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Sengupta system with the Toya system so that damaging overcharge is prevented.

Response to Arguments

7. Applicant's arguments filed 1/17/07 have been fully considered but they are not persuasive. **Regarding claims 1, 10, and 19**, the applicant argues wherein the Toya reference does not disclose a second charging circuit being position within an electronic device in which the second charging circuit can provide a charging current to the battery pack when the electronic device is receiving a charging current. Toya discloses in figure 2 wherein item 123 is the second control charging circuit that controls charging within the system, providing current to the battery pack, while the electronic device is receiving current. **Regarding claims 9 and 18**, the applicant argues that there is no suggestion to combine the switching process of Sengupta with Chao. The combination of the two references provides an improved charge controlling system within Chao that is more efficient and cost effective. **Regarding claim 20**, the applicant argues wherein

there is no motivation to combine the Sengupta and the Toya reference. The Toya reference employs a charge control system that is controlled via the processor, which can be a more efficient manner than by frequency regulation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexis Boateng whose telephone number is (571) 272-5979. The examiner can normally be reached on 8:30 am - 6:00 pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on (571) 272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AB



KARL EASTHOM
SUPERVISORY PATENT EXAMINER